

I CLAIM:

1. A procedure for determining an absolute position of an object, comprising:
 - scanning a code pattern from a series of code patterns, wherein each code pattern of said series of code patterns unambiguously defines one absolute position and comprises a plurality of code elements;
 - scanning additional code elements;
 - forming a code word with a plurality of bits by said scanning said code pattern;
 - forming additional bits from said scanning said additional code elements;
 - checking said plurality of bits of said code word and said additional bits for reliability, and if one of said plurality of bits and said additional bits fails to attain predetermined criteria, it is assigned an error code;
 - predetermining a series of bit strings, with one absolute position being unambiguously assigned to each one of said series of bit strings;
 - comparing said bits of said code word with said predetermined series of bit strings and comparing said additional bits with corresponding bits from said predetermined series of bit strings, and if a match of all of said bits of said code word and said predetermined series of bits strings occurs, assigning a corresponding absolute position to said code word, and upon comparison for a match, any bits assigned an error code are not taken into account.

2. The procedure of claim 1, wherein said additional code elements are at least one portion of a further code pattern from said series of code patterns.

3. The procedure of claim 1, wherein said scanning of said series of code patterns results in generation of a plurality of analog scanning signals, wherein for forming one bit, at least one of said plurality of scanning signals is used.

4. The procedure of claim 2, wherein said scanning of said series of code patterns results in generation of a plurality of analog scanning signals, wherein for forming one bit, at least one of said plurality of scanning signals is used.

5. The procedure of claim 3, wherein said checking comprises comparing a signal amplitude of said scanning signal used to form said one bit with a set-point amplitude.

6. The procedure of claim 3, further comprising forming a bit from two scanning signals, and checking said formed bit for reliability by comparing a difference said the two scanning signals with a set-point difference.

7. The procedure of claim 1, wherein said predetermining said series of bit strings and said assigning said corresponding absolute position is effected by a table of associations stored in a memory.

8. The procedure of claim 1, wherein said predetermining said series of

bit strings and said assigning said corresponding absolute position is effected in accordance with a rule of generation.

9. A position measuring instrument comprising:
 - a code that comprises a series of code patterns, wherein each code pattern of said series of code patterns unambiguously defines one absolute position and comprises a plurality of code elements;
 - a scanner that is movable in a measurement direction relative to said code, said scanner comprises a light source that generates light that scans said code so that said code generates modulated light;
 - a detector that detects said modulated light and generates scanning signals;
 - an evaluation unit that receives said scanning signals and forms a code word with a plurality of bits and forms additional bits from scanning said code, said evaluation unit 1) checking said plurality of bits of said code word and said additional bits for reliability, and if one of said plurality of bits and said additional bits fails to attain predetermined criteria, it is assigned an error code, 2) predetermining a series of bit strings, with one absolute position being unambiguously assigned to each one of said series of bit strings and 3) comparing said bits of said code word with said predetermined series of bit strings and comparing said additional bits with corresponding bits from said predetermined series of bit strings, and if a match of all of said bits of said code word and said predetermined series of bits strings occurs, assigning a corresponding absolute position to said code word, and upon comparison for a match, any bits assigned an error code are not taken into account.

10. The position measuring instrument of claim 9, wherein said code comprises a series of equal-length code elements succeeding one another in said measurement direction.

11. The position measuring instrument of claim 10, wherein each of said code elements comprises two equal-length partial regions, disposed side by side in immediate succession in said measurement direction X.

12. The position measuring instrument of claim 11, wherein said partial regions are complementary to one another.

13. The position measuring instrument of claim 9, wherein said detector comprises a series of detector elements disposed in said measurement direction, wherein in every relative position, at least one said series of detector elements is unambiguously associated with each of said two partial regions.

14. A procedure for determining an absolute position of an object, comprising:
scanning a code pattern from a series of code patterns, wherein each code pattern of said series of code patterns unambiguously defines one absolute position and comprises a plurality of code elements;
forming a code word with a plurality of bits by said scanning said code pattern;

checking said plurality of bits of said code word for reliability, and if one of said plurality of bits fails to attain predetermined criteria, it is assigned an error code;

predetermining a series of bit strings, with one absolute position being unambiguously assigned to each one of said series of bit strings;

comparing said bits of said code word with said predetermined series of bit strings, and if a match of all of said bits of said code word and said predetermined series of bits strings occurs, assigning a corresponding absolute position to said code word, and upon comparison for a match, any bits assigned an error code are not taken into account.